

13 wherein the wastes have been thermally decomposed into the
14 substantially harmless gases.

1 2. (Amended) The thermal decomposition apparatus according to
2 claim 1, further comprising [oxygenless state forming] means for placing said heating
3 chamber in an oxygenless [state] environment such that said plurality of balls are
4 placed in an oxygenless environment [state].

1 3. (Amended) The thermal decomposition apparatus according to
2 claim 1, further comprising [decompressing] means for decompressing said heating
3 chamber such that said plurality of balls are placed in a vacuum [state].

1 4. (Twice Amended) The thermal decomposition apparatus according
2 to claim 1, wherein said plurality of balls are each made of a material [at least one]
3 selected from the group consisting of charcoal, graphite, [and] a carbon composite
4 material, and mixtures thereof.

1 5. (Twice Amended) The thermal decomposition apparatus according
2 to claim 1, wherein each of said plurality of [plurality of] balls [each have
3 impermeability] is impermeable.

1 6. (Twice Amended) The thermal decomposition apparatus according
2 to claim 1, wherein said plurality of balls each take the form of a [perfect] sphere.

1 7. (Twice Amended) The thermal decomposition apparatus according
2 to claim 1, further comprising [pressing] means, provided within said heating
3 chamber, for pressing the wastes against said plurality of balls.

1 8. (Twice Amended) The thermal decomposition apparatus according
2 to claim 1, further comprising a filter made of a material selected from the group
3 consisting [at least one] of [activate] active carbon, [and] charcoal, and mixtures
4 thereof [for allowing the decomposed gases to pass therethrough].

1 9. (Twice Amended) The thermal decomposition apparatus according
2 to claim 1, further comprising:
3 a vacuum meter for measuring the pressure within said heating
4 chamber[.]; and
5 [pressure adjusting] means for adjusting the pressure within said
6 heating chamber to a predetermined value.

1 10. (Twice Amended) The thermal decomposition apparatus
2 according to claim 1, further comprising an intervening spacer which [contain]
3 contains carbon as a main ingredient, the intervening spacer being placed [at least]
4 between said plurality of balls and an inner wall of said heating chamber.

1 11. (Twice Amended) The thermal decomposition apparatus
2 according to claim 1, wherein at least portions of [the] an inner wall of said heating
3 chamber [which] are placed in contact with said plurality of balls, and wherein at
4 least portions of the inner wall are [is] made of a monolithic refractory material
5 [which contains at least one] selected from the group consisting of boron nitride,
6 niobium, silicon carbide, boron carbide, magnesium oxide, hafnium oxide, hafnium
7 dioxide, [and] beryllium aluminum oxide, and mixtures thereof.

1 14. (Twice Amended) The thermal decomposition apparatus
2 according to claim 1, further comprising a decomposed gas harm eliminating device
3 for thermally decomposing harmful materials remaining in the decomposed gases
4 into harmless gases, the decomposed gas harm eliminating device comprising:
5 a decomposed gas heating chamber for heating the decomposed gases;
6 a decomposed gas inlet port for introducing the decomposed gases
7 into said decomposed gas heating chamber;
8 at least one pair of second electrodes provided within said
9 decomposed gas heating chamber;
10 a second light emitting heater consisting of a plurality of second balls
11 which contain carbon as a main ingredient, provided between said at least one pair of

12 second electrodes so as to produce an electric discharge when a voltage is applied
13 across said at least one pair of second electrodes;
14 a harmless gas outlet port for discharging [out of said decomposed gas
15 heating chamber] harmless gases to which the decomposed gases [are] have been
16 rendered [harmless]; and
17 a filter comprising a material selected from the group consisting [at
18 least one] of active carbon, [and] charcoal, and mixtures thereof [for allowing the
19 harmless gases pass therethrough].

1 15. (Amended) The thermal decomposition apparatus according to
2 claim 14, wherein said decomposed gas harm eliminating device further
3 [comprising at least one of] comprises:
4 a second vacuum meter for measuring the pressure within said
5 decomposed gas heating chamber; [,] and
6 second [pressure adjusting] means for adjusting the pressure within
7 said decomposed gas heating chamber to a predetermined value[;].
8 [a second intervening spacer which contain carbon as a main
9 ingredient, placed at least between said plurality of second balls and the inner wall of
10 said decomposed gas heating chamber;
11 at least portions of the inner wall of said decomposed gas heating
12 chamber which are placed in contact with said plurality of second balls being made
13 of a monolithic refractory which contains at least one selected from the group of
14 boron nitride, niobium, silicon carbide, boron carbide, magnesium oxide, hafnium
15 oxide, hafnium dioxide, and beryllium aluminum oxide; and
16 a second pair of electrodes having at least a part thereof in the form of
17 a rod or horn surrounded by said plurality of second balls.]

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Please add the following new claims:

16. (New) The thermal decomposition apparatus according to
claim 14, wherein said decomposed gas harm eliminating device further comprises a
second intervening spacer which contains carbon as a main ingredient, placed at least

4 between said plurality of second balls and the inner wall of said decomposed gas
5 heating chamber.

1 17. (New) The thermal decomposition apparatus according to
2 claim 14, wherein said decomposed gas harm eliminating device further comprises at
3 least portions of the inner wall of said decomposed gas heating chamber which are
4 placed in contact with said plurality of second balls being made of a monolithic
5 refractory material selected from the group consisting of boron nitride, niobium,
6 silicon carbide, boron carbide, magnesium oxide, hafnium oxide, hafnium dioxide,
7 beryllium aluminum oxide, and mixtures thereof.

1 18. (New) The thermal decomposition apparatus according to
2 claim 14, wherein said decomposed gas harm eliminating device further comprises a
3 second pair of electrodes having at least a part thereof in the form of a rod or horn
4 surrounded by said plurality of second balls.

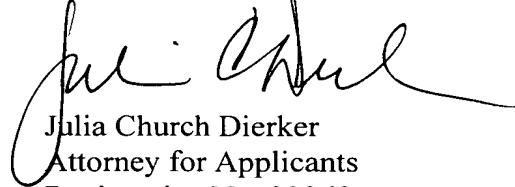
REMARKS

Entry of this voluntary preliminary amendment is respectfully
requested.

Further and favorable consideration is requested. If the Examiner
believes it would expedite prosecution of the above-identified application, the
Examiner is cordially invited to contact Applicants' Attorney at the below-listed
telephone number.

Respectfully submitted,

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